



**ENGINEERING OPERATIONS COMMITTEE  
MEETING MINUTES  
AUGUST 9, 2001 - 9:00 A.M.  
EXECUTIVE CONFERENCE ROOM**

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Present:	C. T. Maki C. Roberts T. E. Davies S. Bower	G. D. Taylor P. F. Miller J. W. Reincke	J. D. Culp J. D. O'Doherty T. Fudaly
Guests:	J. T. LaVoy L. E. Tibbits	M. Frankhouse C. Bleech	L. Galehouse

**OLD BUSINESS**

**1. Approval of the Minutes of the July 16, 2001, Meeting - C. T. Maki**

Minutes of the July 16, 2001, meeting were approved.

**NEW BUSINESS**

**1. Research Report R-1397, *Analysis of the Bridge Barrier Railing, Type 4; Bridge Barrier Railing, Type 5; and Bridge Railing, Aesthetic Parapet Tube* - J. W. Reincke**

The research report analyzes the capacity of the subject railings for conformance with AASHTO LRFD Bridge Design Specifications. The effectiveness of using adhesive anchors to retrofit the railings to a bridge deck was also evaluated. Research findings indicate that Bridge Barrier Railings, Type 4, Type 5 and Aesthetic Parapet Tube, are adequately reinforced.

The adhesive anchors on our qualified products list will perform satisfactorily under dynamic loading for anchoring barriers to bridge decks. The adhesive anchor design procedure needs to be refined based on specific model testing for the Bridge Railing, Aesthetic Parapet Tube. The anchors can continue to be used and as noted in the Action Plan, the Design Division and Structural Research Unit will perform the necessary calculations, and will provide additional reinforcement as needed.

**ACTION:** EOC approves the report with minor editorial changes to the Technical Report Documentation Page.

**2. Overband Crack Fill Treatment (Stand-Alone) - C. Roberts/L. Galehouse**

Maintenance is reporting excessive failure of overband crack sealants on projects throughout the state. The problem appears to be material related. The failures are primarily a result of a loss of sealant by traffic abrasion or adhesion failure. The present problem appears to be a consequence of changing the asphalt used from penetration grade to performance grade binders.

The Capital Preventative Maintenance (CPM) Program had previously targeted implementation of performance warranties for all Group I - Crack and Joint Sealing Treatments in 2002. Based on present performance, the overband crack fill treatment would lead to a high incidence of warranty failures.

The problem is national in scope. Research proposals are being submitted to develop test procedures and specifications for improving the performance of these sealants. Once materials testing correlates with performance, field problems and failures should be resolved.

It is recommended that further use of overband crack fill treatments be restricted until the crack sealing industry can reconcile the problem and develop a performance warranty.

**ACTION:** The use of overband crack fill, as a stand alone pavement treatment, should be reviewed by the regions and possibly limited based on performance trends in their regions. The method can still be used as a pretreatment in conjunction with surface seals since no failures are occurring when crack seals are covered.

Since there are proprietary products that have performed very well in adjacent states, we will institute a pilot program for overband projects planned in the 2002 CPM Program. The pilot program will evaluate and compare the performance of two new products with the established overband material. The department will select a proprietary product for the pilot program and industry will select a product to find better performance characteristics. A letter will be sent to the FHWA requesting use of proprietary products based on it being in the public's best interest. Larry Galehouse will work with the regions to identify the appropriate projects for the 2002 CPM Program. The performance warranty for this treatment will be delayed until the evaluations are completed in 2003.

3. **Pavement Selection, I-75 Reconstruction: CS 25032/JN 45899 - Jointed Reinforced Concrete Pavement Selection - C. Bleech**

The reconstruction alternates considered were a flexible bituminous pavement (Alternate 1) and a jointed reinforced concrete pavement (Alternate 2).

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest Equivalent Uniform Annual Cost. The pavement design and cost analysis summary are as follows:

280mm	Jointed Reinforced Concrete Pavement (Mainline & O.S. Shldr.) (8.0 m jt. spacing)
220mm	Jointed Reinforced Concrete Pavement (Inside Shldr.)
100mm	Open Graded Drainage Course (Mainline & O.S. Shldr.)
160mm	Open Graded Drainage Course (Inside Shldr.)
	Geotextile Separator
150mm	Open Graded Underdrains
300mm	Sand Subbase
680mm	Total Thickness

Present Value Initial Construction Costs ..... \$701,499/directional kilometer  
Present Value Initial User Costs ..... \$294,698/directional kilometer  
Present Value Maintenance Costs ..... \$119,930/directional kilometer

Equivalent Uniform Annual Cost ..... \$69,892/directional kilometer

NOTE: The initial pavement acceptance and the P1 (Mod.) special provisions will be included in this project.

4. **Warranty Requirements for the Capital Preventative Maintenance (CPM) Program - J. D. Culp**

Presently industry develops and promotes new pavement treatments and fixes, and because these are new they have not included a warranty. Since the CPM Program's standard fixes include performance warranties, new treatments or fixes should be required to do so before the department invests in them.

Currently, industry is promoting several new surface treatments without a warranty, e.g. high and medium volume ultra-thin bituminous overlay, road armor, nova chip. They want to compete with the other treatments that do include a performance warranty.

The recommendation is to require that all new pavement treatments and fixes in the CPM Program include a performance warranty, comparable to the current warranty on equivalent CPM fixes, as a condition of their use (except for EOC approved pilot projects).

**ACTION:** EOC approves the recommendation for including a performance warranty on all new pavement treatments and fixes in the CPM Program.

(Signed Copy on File at C&T)  
Jon W. Reincke, Secretary  
Engineering Operations Committee

JWR:kat

cc: EOC Members  
Region Engineers

G. J. Rosine	R. J. Risser, Jr. (MCPA)	L. Stornant	T. L. Nelson
R. J. Lippert, Jr.	A. C. Milo (MRBA)	J. Ruszkowski	R. D. Till
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